US Army Corps
of Engineers
Kansas City District

KANSAS CITY DISTRICT
CORPS OF ENGINEERS
and the
SALINE-LAFAYETTE LEVEE DISTRICT, COLE'S LAKE DRAINAGE DISTRICT NO. 2, MALTA BEND LEVEE DISTRICT, AND TETESEAU BEND LEVEE DISTRICT

Public Law 84-99 of the Flood Control Act of 1944
Levee Rehabilitation – NEPA Review, Environmental Assessment & DRAFT Finding of No Significant Impact

SALINE-LAFAYETTE LEVEE DISTRICT (ITEM 67), COLE'S LAKE DRAINAGE DISTRICT NO. 2 (ITEM 65), MALTA BEND LEVEE DISTRICT (ITEM 64), AND TETESEAU BEND LEVEE DISTRICT (ITEM 61AC), NON-FEDERAL, EMERGENCY LEVEE REHABILITATION PROJECT

Missouri River
Saline County, Missouri

February 2008

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

DRAFT
Finding of No Significant Impact

Saline-Lafayette Levee District (Item 67), Cole's Lake Drainage District No. 2 (Item 65), Malta Bend Levee District (Item 64), and Teteseau Bend Levee District (Item 61Ac) Levee Rehabilitation Project Saline County, Missouri

Project Summary

The U.S. Army Corps of Engineers, Kansas City District (CENWK), in cooperation with the project sponsors, Saline-Lafayette Levee District, Cole's Lake Drainage District, Malta Bend Levee District, and Teteseau Bend Levee District, propose to construct the Saline-Lafayette Levee District, Cole's Lake Drainage District, Malta Bend Levee District, and Teteseau Bend Levee District Levee Rehabilitation Project, under the authority of Public Law 84-99 of the Flood Control Act of 1944.

The proposed project would involve repairing severe toe slope erosion, damaged drainage structures, and damaged sod cover at various locations along the levee as a result of the May, 2007 flood event. The proposed repairs are located near the communities of Waverly and Grand Pass in Saline County, Missouri, along the right descending bank of the Missouri River from River Mile 292.9 to River Mile 278.2.

The recommended plan consists of the preferred repair alternatives selected for each type of levee damage. Riverside toe slope erosion would be repaired with landward levee setbacks. Damaged drainage structures would be repaired in place. Riverside slope sod cover repair would be seeded with a predetermined grass seed mix. The recommended plan is the most cost effective plan and is economically justified.

The recommended plan would result in no adverse impacts to any Federally-listed threatened or endangered species or their habitat, or properties listed, proposed for listing, eligible for listing, or potentially eligible for listing in the National Register of Historic Places.

Borrow would be obtained from previously "environmentally cleared" existing borrow areas that were borrow sources during the 1993 and 1995 repair actions, which have developed wetland characteristics. Approximately 7.7 acres of wetland will be impacted by the proposed repair

actions. The excavation of silt and vegetation from these areas will increase wetland depth and surface area and benefit the aquatic ecosystem. Therefore, no mitigation is proposed.

Alternatives

The repair alternatives considered for each type of damage include:

Severe riverside toe slope erosion: (1) In-place repairs; (2) Landward levee setbacks; and (3) No action.

Damaged drainage structures: (1) In-place repair and (2) No Action.

Riverside slope sod cover repair: (1) Seeding and (2) No Action.

Recommended Plan

Saline-Lafayette Drainage District
The recommended plan consists of the preferred repair alternatives selected for each type of levee damage. Riverside toe slope erosion would be repaired with landward levee setbacks. Damaged drainage structures would be repaired in place. Riverside slope sod cover repair would be seeded.

The recommended repair action consists of repairs to severe toe slope erosion (sta. 248+00 to 251+30), with an approximate 778-linear-feet-long landward levee setback; severe toe slope erosion (sta. 377+00 to 379+50 and 384+90 to 387+30), with an approximate 1,400-linear-feet-long landward levee setback; excavation and repairs to drainage structures with disturbed area backfilled to original grades (sta. 486+80 & 494+15); and re-seeding of riverside levee slope (sta. 287+75 to 364+60 & 494+15 to 500+00). Construction areas would be seeded and mulched.

The material for the levee setback at Station 248+00 to 251+30 would be obtained from two sources. Approximately 80% of borrow material would be obtained by excavated from existing levee segments riverward of the new levee setback, and the remaining 20% would come from a riverside borrow area.

The borrow material for the levee setback at Station 377+00 to 379+50 and 384+90 to 387+30 would be obtained from two sources. Approximately 80% of borrow material would be obtained by grading the remaining existing levee segments riverward of the new levee setback, and the remaining 20% would come from alongside the existing Cranberry Chute ditch-line/slough limits.

Cole's Lake Drainage District No. 2, Malta Bend Levee District, and Teteseau Bend Levee District
These levees sustained no damage but are included in this report because all four levees work in concert to form one complete flood control unit.

Summary of Environmental Impacts

Environmental impacts are primarily the result of the levee setbacks and borrow activities. Since the levee setback repairs would be on alignments landward of the existing levees, the recommended plan would require that approximately six acres of agricultural land would be taken out of production due to the construction of the setback levees. The setbacks would reduce available agricultural cropland by occupying lands currently available for this purpose. However, an additional six acres would be available for floodwater conveyance and floodplain wildlife habitat.

Approximately 7.7 acres of wetland dominated by sparse cottonwood and willow saplings will be impacted due to borrow activities. The majority of this acreage is located within areas previously used for borrow during the 1993 and 1995 flood events, which have since developed wetland characteristics. The removal of silt and early successional growth consisting of willow and cottonwood saplings (<9 inches diameter breast height) from these areas will benefit the aquatic ecosystem as wetland depth and surface area would increase. Opportunistic vegetation such as willow and cottonwood colonize readily after a disturbance.

The recommended plan would result in no impacts to any Federally-listed threatened or endangered species or their habitat. The recommended plan would result in no impacts to properties listed, proposed for listing, eligible for listing, or potentially eligible for listing in the National Register of Historic Places.

The in-place repairs of damaged drainage structures would result in the grading of areas planted with a levee grass seed mix consisting of brome, fescue, and rye. Areas of the existing levee sections damaged by flooding would be temporarily disturbed by the proposed construction activity. The adverse effects associated with the proposed project are long-term/minor associated with the loss of agricultural cropland, and short term/minor associated with project construction and borrow activity.

The adverse effects associated with the proposed project are long-term/minor associated with the loss of agricultural cropland, and short term/minor due to the temporary impacts to wetlands and disturbance associated with project construction. These minor adverse effects would be greatly offset by restoring the flood risk management capability, and its associated social and economic benefits of the existing levee system. The flood risk management level achieved by the recommended plan would be the same as the pre-flood risk management level.

Mitigation Measures

Identification of borrow sites was completed in accordance with the Standard Operating Procedures (SOP) developed through coordination with the U.S. Fish and Wildlife Service and the Missouri Department of Conservation for the Selection of Borrow Sites Missouri River and Tributaries 1995 Levee Repair. Although setback construction would result in the removal of some small willow and cottonwood saplings (<9 inches diameter breast height), the SOP states that the clearing of successional woody vegetation and excavation which removes accumulated silt and expands existing wetlands and scour holes are considered beneficial and will enhance the

overall function and value of the aquatic ecosystem. Since the proposed borrow activity in the scour hole has been designed to enhance the functions and values of the aquatic ecosystem no compensatory mitigation is required.

A small fringe of timber, cottonwoods and willows, (< 9 inches breast diameter height) will be removed during project construction. The U.S. Fish and Wildlife Service has stated that natural plant succession should provide adequate re-vegetation to impacted non-mast producing trees. Therefore, no mitigation measures are warranted or proposed.

Public Availability

Prior to a decision on whether to prepare an Environmental Impact Statement, CENWK circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI), dated February 12, 2008, with a thirty-day comment period ending on March 13, 2008 to the public and resource agencies. The Notice was e-mailed to individuals/agencies/businesses listed on CENWK-Regulatory Branch's e-mail mailing list. The Notice informed these individuals that the EA and Draft FONSI were available on the CENWK webpage for review or that they could request a hard copy of the EA and Draft FONSI in order to provide comment.

Levee rehabilitation projects completed by the Corps under authority of Public Law 84-99 generally do not require the preparation of an Environmental Impact Statement. These projects typically result in long-term social and economic benefits and the adverse environmental effects are typically minor/long-term and minor/short-term construction related. Minor long-term impacts associated with these projects are typically well outweighed by the overall long-term social and economic benefits of these projects. As described above, the recommended plan is consistent with this assessment of typical levee rehabilitation projects completed by the Corps under authority of Public Law 84-99 of the Flood Control Act of 1944.

Conclusion

After evaluating the anticipated environmental, economic, and social effects of the proposed activity, it is my determination that construction of the proposed Saline-Lafayette Levee District, Cole's Lake Drainage District No. 2, Malta Bend Levee District, and Teteseau Bend Levee District Levee Rehabilitation Project does not constitute a major Federal action that would significantly affect the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

Date: _____

_____

Roger A. Wilson, Jr.
Colonel, Corps of Engineers
District Commander

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers, Kansas City District (CENWK), in cooperation with the project sponsors, Saline-Lafayette Levee District, Cole's Lake Drainage District, Malta Bend Levee District, and Teteseau Bend Levee District, propose to construct the Saline-Lafayette Levee District, Cole's Lake Drainage District, Malta Bend Levee District, and Teteseau Bend Levee District Levee Rehabilitation Project, under the authority of Public Law 84-99 of the Flood Control Act of 1944. The proposed project would involve the repair to severe toe slope erosion with landward levee setbacks, in-place repairs, which include excavation and repairs to drainage structures and disturbed area backfill, and re-seeding of riversides slopes as described below. Repairs are required as a result of the flood event declared on 6 May 2007.

The Saline-Lafayette levee segment consists of a portion of the approximately 56,840 linear feet of earthen flood control works (FCW) on the right descending bank (RDB) of the Missouri River between river mile 292.9 and 278.2 in Saline County, Missouri. The combined FCW protects approximately 20,860 acres of agricultural lands of which 20,610 acres are in croplands; approximately 6 miles of gravel surfaced County and Township roads, numerous unimproved farm to market roads, approximately 10 miles of utility lines, 2 businesses, 24 residences, 8 barns, 24 machine sheds, 23 outbuildings, 13 irrigation systems, 50 grain bins, and the Missouri Department of Conservation's Grand Pass Conservation Area. The recommended repair action consists of repairs to severe toe slope erosion (sta. 248+00 to 251+30), with an approximate 778-linear-feet-long landward levee setback; severe toe slope erosion (sta. 377+00 to 379+50 and 384+90 to 387+30), with an approximate 1,400-linear-feet-long landward levee setback; excavation and repairs to drainage structures with disturbed area backfilled to original grades (sta. 486+80 & 494+15); and re-seeding of riverside levee slope (sta. 287+75 to 364+60 & 494+15 to 500+00). Construction areas would be seeded and mulched.

The material for the levee setback at Station 248+00 to 251+30 would be obtained from two sources. Approximately 80% of borrow material would be obtained by degrading the remaining existing levee segments riverward of the new levee setback, and the remaining 20% would come from a riverside borrow area, which contains sparse growth of small willow and cottonwood sapling's (<9 inches diameter breast height) and these would unavoidably be cleared.

The material for the levee setback at Station 377+00 to 379+50 and 384+90 to 387+30 would be obtained from two sources. Approximately 80% of borrow material would be obtained by degrading the remaining existing levee segments riverward of the new levee setback, and the remaining 20% would come from alongside the existing Cranberry Chute ditch-line/slough limits. This setback and borrow operation will require the removal of some small willow and cottonwood saplings measuring <9 inches diameter breast height.

All aforementioned designated borrow locations are positioned within previously "environmentally cleared" borrow locations assessed during the 1993 and 1995 repair actions.

Cole's Lake Drainage District No. 2, Malta Bend Levee District, and Teteseau Bend Levee District: These levees sustained no damage but are included in this report because all four levees work in concert to form one complete flood control unit.

Prior to a decision on whether to prepare an Environmental Impact Statement, CENWK circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI), dated February 12, 2008, with a thirty-day comment period ending on March 13, 2008 to the public and resource agencies. The Notice was e-mailed to individuals/agencies/businesses listed on CENWK-Regulatory Branch's e-mail mailing list. The Notice informed these individuals that the EA and Draft FONSI were available on the CENWK webpage for review or that they could request a hard copy of the EA and Draft FONSI in order to provide comment.

Additional information concerning this project may be obtained from Mr. Matthew D. Vandenberg, Environmental Resources Specialist, PM-PR, Kansas City District - U.S. Army Corps of Engineers, by writing the above address, or by telephone at 816-389-3146.

NEPA REVIEW
ENVIRONMENTAL ASSESSMENT
&
DRAFT FINDING OF NO SIGNIFICANT IMPACT

PUBLIC LAW 84-99
SALINE-LAFAYETTE LEVEE DISTRICT, COLE'S LAKE DRAINAGE DISTRICT NO. 2, MALTA BEND LEVEE DISTRICT, AND TETESEAU BEND LEVEE DISTRICT
LEVEE REHABILITATION PROJECT
SALINE COUNTY, MISSOURI

TABLE OF CONTENTS

NEPA REVIEW
ENVIRONMENTAL ASSESSMENT
&
FINDING OF NO SIGNIFICANT IMPACT

PUBLIC LAW 84-99
SALINE-LAFAYETTE LEVEE DISTRICT, COLE'S LAKE DRAINAGE DISTRICT NO. 2, MALTA BEND LEVEE DISTRICT, AND TETESEAU BEND LEVEE DISTRICT
LEVEE REHABILITATION PROJECT
SALINE COUNTY, MISSOURI

Section 1: INTRODUCTION

This Environmental Assessment provides information that was developed during the National Environmental Policy Act (NEPA) public interest review of the proposed Public Law 84-99 Saline-Lafayette Levee District, Cole's Lake Drainage District No. 2, Malta Bend Levee District, and Teteseau Bend Levee District Levee Rehabilitation Project.

Section 2: AUTHORITY

The Kansas City District – U.S. Army Corps of Engineers (CENWK), in cooperation with the project sponsors, Saline-Lafayette Levee District, Cole's Lake Drainage District No. 2, Malta Bend Levee District, and Teteseau Bend Levee District, propose to construct the Saline-Lafayette Levee District, Cole's Lake Drainage District No. 2, Malta Bend Levee District, and Teteseau Bend Levee District Levee Rehabilitation Project under the authority of Public Law 84-99 of the Flood Control Act of 1944.

Section 3: PROJECT LOCATION

The Saline-Lafayette Levee District, Cole's Lake Drainage District No. 2, Malta Bend Levee District, and Teteseau Bend Levee District are located near the communities of Waverly and Grand Pass, in Saline County, Missouri, along the right descending bank (RDB) of the Missouri River from River Mile 263.0 to RM 292.9, as described below.

The Saline-Lafayette levee segment consists of a portion of the approximately 56,840 linear feet of earthen flood control works (FCW) on the RDB of the Missouri River between river mile 292.9 and 278.2 in Saline County, Missouri.

The Cole's Lake levee segment consists of a portion of the approximately 56,840 linear feet of earthen flood control works (FCW) on the RDB of the Missouri River between river mile 278.2 and 277.1 in Saline County, Missouri.

The Malta Bend levee segment consists of a portion of the approximately 56,840 linear feet of earthen flood control works (FCW) on the RDB of the Missouri River between river mile 277.1 and 273.7 in Saline County, Missouri.

The Teteseau Bend levee segment consists of a portion of the approximately 56,840 linear feet of earthen flood control works (FCW) on the RDB of the Missouri River between river mile 273.7 and 263.0 in Saline County, Missouri.

Section 4: EXISTING CONDITION

The declared flood event on 6 May 2007 caused the follow damages to the Saline-Lafayette Levee District, Cole's Lake Drainage District No. 2, Malta Bend Levee District, and Teteseau Bend Levee District levees:

The damages to the Saline-Lafayette levee segment consist of severe riverside toe slope erosion at stations 248+00 to 251+30, 377+00 to 379+50, and 384+90 to 387+30; drainage structure damages at stations 486+80 and 494+15; and intermittent reaches of lost (destroyed) sod cover on riverside levee embankment slope at stations 287+75 to 364+60 and 495+15 to 500+00.

Cole's Lake Drainage District No. 2, Malta Bend Levee District, and Teteseau Bend Levee District: These levees sustained no damage but are included in this report because all four levees work in concert to form one complete flood control unit.

Section 5: PURPOSE & NEED FOR ACTION

The project purpose and need is to rehabilitate the damaged levee and restore the associated social and economic benefits. The Saline-Lafayette Levee District, Cole's Lake Drainage District No. 2, Malta Bend Levee District, and Teteseau Bend Levee District received damages to a section of their levee during the 6 May 2007 declared flood event. Prior to the May 2007 event, the Saline-Lafayette Levee District, Cole's Lake Drainage District No. 2, Malta Bend Levee District, and Teteseau Bend Levee District levees provided an approximately 25+ year level of flood risk management.

In their current damaged state, the Associated Levee District levees are estimated to provide an approximately two-year level of protection. The existing condition exposes all public and private infrastructure and agricultural croplands to a high level of risk from future flooding. Failure to restore the flood risk management capability of the levee system would keep area residents livelihood and social well-being in turmoil, subject to the continuous threat of flooding until a level of flood protection is restored. Failure to reconstruct the levee could adversely affect the tax base of the counties and municipal governments. In addition, loss of jobs and potential losses in agricultural production on lands previously protected by the levees would also be incurred.

Section 6: ALTERNATIVES CONSIDERED

The repair alternatives considered for each type of damage include:

Severe riverside toe slope erosion: (1) In-place repairs; (2) Landward levee setback **(RECOMMENDED)**; and (3) No action.

Damaged drainage structures: (1) In-place repair **(RECOMMENDED)** and (2) No Action.

Riverside slope sod cover repair: (1) Seeding **(RECOMMENDED)**; and (2) No Action.

Section 7: RECOMMENDED PLAN

The recommended plan consists of the preferred repair alternatives selected for each type of levee damage. Landward levee setback is the preferred alternative for severe riverside toe slope erosion. In-place repair is the preferred alternative for damaged drainage structures, and seeding is the preferred alternative to repair damaged riverside slope sod cover.

Severe Riverside Toe Slope Erosion

Landward levee setback is the preferred alternative to repair the severe riverside toe slope erosion. Although the landward levee setback would reduce the area of agricultural land by about six acres, this acreage allows for a larger area of the floodplain to be available for floodwater dissipation and also provides increased riverward habitat for wildlife. This alternative would also return the flood risk management level to the original pre-flood level. Landward levee setback is also the preferred alternative from an economic standpoint as it is approximately one-third the cost of an in-place repair. An in-place repair would also return the flood risk management level to the original pre-flood level, but would not provide increased area for floodwater dissipation or wildlife habitat at a higher cost. The no action alternative is unacceptable as unrepaired, severe riverside toe slope erosion would not return flood risk management levels to a pre-flood level. No action would also result in increased social and economic costs as damaged areas of the levee would cause the flooding of previously protected land and additional flood damage to the levee in these areas would occur.

Damaged Drainage Structures

The preferred alternative to repair damaged drainage structures is in-place repair. Although in-place repair would result in disturbing previously disturbed land, the no action alternative would result in increased damage to the levee and adjacent ground over and above that which would occur from an in-place repair. The in-place repair alternative would return the flood risk management level to the original pre-flood level. The no action alternative is unacceptable as this alternative would not return the flood risk management level to the original pre-flood level and thereby increase social and economic costs due to the absence of protecting the adjacent land.

Damaged Sod Cover

The preferred alternative to repair sod damage is to reestablish sod cover by seeding. Seeding the area with an established mix of brome, fescue, and rye would provide the relatively quick

establishment of a uniform, low growing vegetative cover that could be easily maintained compared to natural revegetation. This type of vegetative cover is also preferred over natural revegetation on levees because it can be mowed to a low height, which allows inspection and the assessment of levee integrity. Natural revegetation would likely result in a variety of plants colonizing areas characterized by sod damage. Disturbed areas along the floodplain are typically colonized by willows (Salix spp.) and eastern cottonwood (*Populus deltoides*). Opportunistic species such as these do not provide adequate levee protection, because their roots do not adequately bind the soil and they can create holes in the levee which may result in voids and compromise levee integrity. Reestablishing sod cover by seeding would return the flood risk management level to the original pre-flood level. The no action alternative is unacceptable as this alternative would not return the flood risk management level to the original pre-flood level. The no action alternative would result in increased social and economic costs as areas of the levee with sod cover damage would erode and further compromise levee integrity and not adequately protect the adjacent land.

Therefore, the recommended plan is to implement the preferred alternatives discussed above for each individual type of repair. The recommended plan is the most cost effective plan and is economically justified. The recommended plan consists of repairing riverside toe slope erosion with a landward levee setback, the in-place repair of damaged drainage structures, and reestablishing riverside slope sod cover by seeding.

Section 8: NATIONAL ENVIRONMENTAL POLICY ACT REVIEW

As part of the NEPA review for the proposed project, CENWK circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI), dated February 12, 2008, with a thirty-day comment period ending on March 13, 2008 to the public and resource agencies. The Notice was e-mailed to individuals, agencies, and businesses listed on CENWK-Regulatory Branch's e-mail mailing list. The Notice informed these individuals that the EA and Draft FONSI were available on the CENWK webpage or that they could request the EA and Draft FONSI in writing, in order to provide comment. The following comments were received and evaluated from coordination of the Notice:

(Section pending comments)

Section 9: AFFECTED ENVIRONMEMENT:

A wide variety of resources along with the related environmental, economic and social effects were considered during the development and evaluation of project alternatives. These include: atmospheric quality; noise levels; water quality; water supply; soil control; fish and wildlife; vegetation; energy resources; wetlands; geological resources; agricultural activity; employment; tax base; public service; growth patterns; land use; recreation; archaeological and historical resources; flood control; esthetics; navigation; transportation; health and safety; community service; population density and other items identified through public and agency comments.

The project area consists of agricultural row crop ground located on the Missouri River flood plain between river miles 292.9 and 278.2. The project area disturbance involves approximately

25 acres or less (including borrow locations). The Corps Kansas City District's Standard Operating Procedures for identification of potential borrow sites, which was developed in consultation with the resource agencies to avoid/and or minimize adverse environmental effects, would be implemented for this project if different or additional borrow sites are needed.

Section 10: ENVIRONMENTAL CONSEQUENCES:

Primary resources of concern identified during the evaluation included: noise levels, water quality, fish and wildlife, vegetation, wetlands, geologic resources, agricultural activity, archeological and historical resources, flood control, economics and esthetics. Projects impacts to other resources were determined to be no effect. The discussion of environmental impacts to natural resources includes impacts as a result of levee repair and operation and borrowing activities.

Noise levels

The recommended plan would result in minor short term construction related noise impacts. These impacts are the result of the operation of heavy machinery during project construction. These noise levels would be in addition, but similar to those produced by agricultural equipment which is routinely operated in the project area. No residences, businesses, churches, park areas or other areas sensitive to increased noise levels were identified in the project area. There is a remote chance that the noise from project construction could disturb the occasional boater on the nearby Missouri River or person(s) participating in outdoor recreation on the private land in the project area.

The in-place repairs of riverside toe slope erosion would also require the use of heavy machinery and result in similar noise impacts as a landward levee setback. The "No Action" alternative would produce no increase in noise levels in the project area and result in an unrepaired levee prone to increased erosion and damage. The natural revegetation of the riverside slope would result in less noise generated than seeding eroded areas.

Water quality

The recommended plan could potentially result in minor, temporary, construction related adverse impacts to water quality resulting from site runoff and increased turbidity. The minor impacts associated with the recommended plan would be avoided and/or minimized to the greatest extent possible by the implementation of Best Management Practices and measures required under the National Pollutant Discharge Elimination System (NPDES) permit.

In-place repairs to fix riverside toe slope erosion would require the reestablishment of levee embankment and the filling of associated riverward scour and a landside area fill from the levee crest to the toe-out. In-place repairs would result in an increased potential for minor water quality impacts.

The no action alternative in regards to replacing riverside slope sod cover repair would result in an increased potential to adversely impact water quality as the colonization of the slope by plant species would not result in a uniform, appropriate vegetative cover and the levee would be prone to erosion.

In the absence of the Federal action addressing levee improvements (no action alternative), a high water event could result in the release of a variety of industrial chemicals and substantially impact the natural and human environment within the project area. Avoiding repair actions could result in adverse impacts to water quality from increased levels of nutrient loading and wastes, including runoff of pollutants from industrial sources, petroleum products, and non-point sources of human and animal wastes.

Best management practices would be designed to minimize the incidental fallback of material into waterways during construction and to minimize the introduction of fuel, petroleum products, or other deleterious material from entering into the waterway. Such measures could include use of erosion control fences; storing equipment, solid waste, and petroleum products above the ordinary high water mark and away from areas prone to runoff; and requiring that all equipment be clean and free of leaks. To prevent fill from reaching water sources by wind or runoff, fill would be covered, stabilized or mulched, and silt fences would be used as required. The NPDES permit would be obtained prior to project construction. All appropriate measures will be taken to minimize erosion and storm water discharges during and after construction.

Fish and Wildlife

The recommended plan would result in minor, temporary, construction related adverse impacts to fish and wildlife resources. The impacts to wildlife resources would be related to noise and visual disturbance during the construction activity. The impacts to fishery resources would be related to potential site runoff and increased turbidity, which could adversely impact feeding, spawning, and sheltering for species not accustomed to these conditions.

The in-place repairs of riverside toe slope erosion would result in impacts to fish and wildlife habitat similar to the landward levee setback. There may an increased potential for runoff and increased turbidity due to the proximity of the in-place repair locations to the adjacent water body.

The no action alternative would have minimal effects on fish and wildlife resources. Aquatic and wetland species may benefit as more frequent flooding would occur in the now unprotected areas. There would be a loss of habitat for terrestrial organisms during flood events. Terrestrial organisms would be temporarily displaced and have their habitat degraded by flooding. Taking "no action" to reestablish damaged sod cover would result in an increased potential of impacts to fish and wildlife habitat. Without seeding to establish a uniform sod cover, areas with damaged sod cover would be more prone to erosion and runoff.

Threatened and Endangered Species

The recommended plan would have no adverse effects on any Federally-listed threatened or endangered species or their habitat. Pallid sturgeon (*Scaphirhynchus albus*) are found primarily in the Missouri River and Mississippi River. No work is proposed within the Missouri River. Indiana bats (*Myotis sodalis*) roost in trees during the spring and summer that are 9 inches diameter breast height or greater, and hibernate in caves during the fall and winter. Only cottonwood and willow saplings would be adversely impacted by levee repair and borrow activities. No impacts to any state listed threatened or endangered species or their habitat were identified.

Repairs resulting from implementation of the in-place repairs of riverside toe slope erosion would have no adverse effects on any Federally-listed threatened or endangered species or their habitat for the same reasons as described above.

The natural revegetation of sod cover would not adversely affect any Federally-listed threatened or endangered species or their habitat. Natural revegetation could provide positive impacts to the Indiana bat as trees that this species uses for habitat could colonize and provide additional roosting habitat. The natural revegetation of sod cover could also positively impact the migratory pallid sturgeon as increased erosion would likely occur on eroded toe slopes before natural colonization could stabilize the slopes, thereby increasing habitat availability depending on the severity of erosion over time and the frequency and duration of flood events.

The no action alternative would have no adverse effects on any Federally-listed threatened or endangered species or their habitat. The no action alternative would likely benefit fish and wildlife including Federally-listed threatened or endangered species as increased erosion of areas needing repair would provide increased aquatic and wetland habitat. No adverse impacts to any state listed threatened or endangered species or their habitat were identified.

Vegetation

The recommended plan would result in short-term, minor construction related impacts and a long-term change in land use due to the landward levee setbacks being constructed in areas used for agriculture. Some of the protected land adjacent to the existing levee currently used to grow harvestable crops (approximately six acres) would be converted to grassed levee slopes. At the Saline-Lafayette site, a few isolated cottonwood and willow saplings would be cleared for the alignment of the new levee setback and during borrow operations. The US Fish and Wildlife Service has stated that natural plant succession should provide adequate revegetation for these minor impacts.

Repairs resulting from implementation of the in-place repairs of riverside toe slope erosion would not result in the conversion of agricultural land to grassed levee slopes. Therefore, this alternative would not result in a change in land use of approximately six acres. Adverse impacts to some willow and cottonwood saplings would occur as borrow material would still be needed to fill scour holes.

The natural revegetation of damaged sod cover would result in a slight increase in successional plant biomass in the short-term, although these areas would be subject to erosion and likely result in a colonization/erosion cycle.

The no action alternative could result in increased erosion to the levee and the increased flooding of protected adjacent land. An increase in the surface area of natural floodplain vegetation would occur if land used for agriculture is abandoned due to the increased risk of flooding. Overtime, successional vegetative growth would result in an overall increase in natural floodplain vegetation.

Wetlands

The recommended plan would result in a total wetland impact of 7.7 acres due to filling a small portion of the Cranberry Chute and borrow activities. Borrow would be obtained from local sources including existing levee segments riverward of the setback, existing borrow areas, and along the existing Cranberry Chute ditch line. Approximately 80% of the borrow needed for the recommended plan (52,142 cubic yards) would come from within previously "environmentally cleared" borrow locations assessed during the 1993 and 1995 repair actions. The remaining borrow would be obtained from along the Cranberry Chute ditch line. About 1.7 acres would be filled due to the levee setback footprint location within the Cranberry Chute and 6.0 acres of wetland within existing borrow areas from which borrow would be obtained. Designated borrow locations are positioned within previously used borrow locations assessed during the 1993 and 1995 repair actions. Cleared woody debris would be deposited into some of the excavated wetlands. There is approximately 408 acres of wetland within the vicinity of the proposed project. The wetlands impacted are dominated by scrub-shrub cottonwood and willow. Filling the Cranberry Chute is unavoidable as it is oriented perpendicular to the existing levee. These actions will be authorized under General Permit Number NWKGP-41.

The excavation of existing borrow areas, levee segments riverward of the setback, and along the ditch line would provide positive impacts as the excavation of silt would deepen these areas and excavation would also increase borrow area and ditch surface areas. Following construction, approximately six acres of wetland habitat will be enhanced from the sloping of perimeter faces of the borrow areas. Additionally, the levee setbacks will keep the newly created blew holes within the riverward floodplain, thus allowing them to mature into functioning wetlands overtime. The landward levee setback also will add approximately six acres to the floodplain that was previously used as farmland, which would provide temporary wetland functions and value when inundated.

In-place repairs of riverside toe slope erosion would result in impacts to jurisdictional wetlands. Repairs resulting from implementation of this alternative would have minor temporary construction related impacts to existing borrow areas. Because this alternative would fill the newly created blew holes to keep the levee on its existing alignment, this alternative would not protect blew holes nor would it add additional acres to the floodplain. This alternative also would not add fill to Cranberry Chute. However, due to the relatively large amount of borrow required for in-place repairs (140,077 cubic yards of material), approximately 15 acres of borrow area would be utilized, thus enhancing existing wetlands due to excavation and the sloping of perimeter faces.

The natural revegetation of areas with damage to riverside slope sod cover could potentially provide positive impacts to wetlands located landside as the levee would be more prone to erosion and a breach would increase the hydrology of the protected area.

The no action alternative would result in no impacts to wetlands, but is unacceptable as it would not meet the project purpose and need of rehabilitating the damaged levee to a pre-flood level of flood risk management and restoring social and economic benefits. Although 7.7 acres of scrub-shrub wetland would be impacted, the excavation of silt from existing borrow wetlands and increasing borrow wetland area would provide benefits to the aquatic ecosystem.

Geologic Resources
The recommended plan will require relatively shallow excavation to obtain borrow for the levee repairs. Construction and borrow activity to implement the recommended plan would have no affect on geologic resources. Similarly, the relatively shallow excavation of borrow for the in-place repair of damaged drainage structures would have no affect on geologic resources. The natural revegetation of levee slopes would be conducted on existing levees and would have no impact on geologic resources.

The no action alternative would result in increased levee erosion and risk of flooding to adjacent land, but would not affect geologic resources.

Agriculture
The recommended plan, while restoring the pre-flood level of flood risk management, would adversely impact agricultural production as approximately six acres of agricultural land would be converted to grassed levee. This is considered a long-term minor impact as the levee system protects an additional 20,854 acres of cropland.

The in-place repairs of riverside toe slope erosion would have no adverse impacts on agricultural activity as the levee would be placed on its existing alignment. Implementing in-place repairs instead of levee setbacks as the recommended repair is economically feasible; however, the recommended plan that includes a levee setback is the most cost effective plan, economically justified, and provides more benefits to fish and wildlife.

The "No Action" Alternative would adversely impact agricultural activity by exposing agricultural land, homes, and structures to increased flooding and would cause related adverse impacts such as lost income, lower tax base, and decreased land value.

Archeological and Historical Resources
The recommended plan would have no impact to sites listed on or eligible for inclusion on the National Register of Historic Places (NRHP). A background check of the NRHP and site location maps identified no previously recorded sites within or near the proposed project areas. In a letter to State Historic Preservation Officer (SHPO), the Corps recommended that the project would have no effect on historic properties and that the project should be allowed to proceed. SHPO concurred with this recommendation on November 26, 2007 (Appendix II). The project will be coordinated with appropriate federally recognized Native American tribes (Tribes). If in the unlikely event that archeological material is discovered during project construction, work in the area of discovery will cease, the discovery would be investigated by a qualified archeologist, and the find would be coordinated with SHPO and the Tribes.

The in-place repairs of riverside toe slope erosion would result in no effects to archaeological or historical resources.

The no action alternative would result in no effects to archaeological or historical resources.

Flood Risk Management
The recommended plan would restore an approximately 25+ year level of flood protection to the existing Associated Levee Districts levee system, which would equal the level that existed prior to the declared flood event of 6 May 2007. The area is located in the base floodplain and is subject to Executive Order 11988, "Floodplain Management". In addition, since the proposed levee repair would restore this levee to its near original alignment and pre-flood grade and cross section, no increase in floodwater surface elevations would occur. As the recommended plan would not directly or indirectly support more development in the floodplain or encourage additional occupancy and/or modify of the base floodplain, the Corps has determined that the recommended plan complies with the intent of Executive Order 11988.

The in-place repair of riverside toe slope erosion would result in a similar positive impact to flood risk management as a landward levee setback and in-place repair would result in a restored level of flood risk management equal to the pre-flood condition (approximately 25+ year).

The no action alternative is unacceptable as it would continue to expose all public and private infrastructure and agricultural lands previously protected to an increased risk of future flooding.

Economics
Based on the Corps' economic analysis, the recommended plan is the most cost effective plan and is economically justified with a benefit-cost ratio of 36.4.

Based on the Corps' economic analysis, the in-place repair of riverside toe slope erosion, if implemented as part of the recommended plan rather than landward levee setbacks, results in a lower benefit to cost ratio of 15.8 due to the increased amount of borrow material needed.

The no action alternative has a zero benefit to cost ratio and would continue to expose all public and private infrastructure and agricultural lands previously protected by the levee to a high level risk of future flooding. Failure to repair the levee would adversely affect the tax base of the counties and municipal governments and special districts, such as school districts. In addition, loss of jobs and potential losses in agricultural production on lands protected by the levee would also be incurred.

Aesthetics
The recommended plan would result in very minor and temporary adverse aesthetic impacts associated with construction. The human population that could potentially be affected by the activity would be expected to be very low, restricted to the occasional boater on the Missouri River or person(s) participating in outdoor recreation on the private land in the project area. Upon completion of the project, there would be a relatively minor aesthetic change compared to pre-flood aesthetics, primarily due to the landward levee setback.

The in-place repair of levee toe slope erosion would result in basically no change in pre-flood event levee aesthetics.

The no action alternative would likely result in the continued erosion of the levee and potentially breaching. It is anticipated that there would be minor short-term impacts to aesthetics and

potentially long-term major impacts to aesthetics as an unrepaired levee would eventually cause increased flooding to previously protected land. The rate and severity of the no action alternative on aesthetics depends on the frequency and duration of flooding.

Section 11: SUMMARY OF ENVIRONMENTAL EFFECTS OF THE NON-RECOMMENED PLANS

Implementing the in-place repair for riverside toe slope erosion was not recommended. Although this alternative would have allowed approximately 15 acres of the existing borrow area to obtain wetland characteristics through the excavation and sloping of the perimeter faces, as well as resulted in no fill in Cranberry Chute, this alternative resulted in a much lower benefit to cost ratio (BC ratio). The lower BC ratio was due to the increased amount of borrow material and work needed to fill the existing blew holes.

Natural revegetation of damaged riverside slope sod cover would likely result in a variety of plants colonizing areas characterized by sod damage. Disturbed areas along the floodplain are typically colonized by willows (*Salix* spp.) and eastern cottonwood (*Populus deltoides*). Opportunistic species such as these do not provide adequate levee protection, because their roots do not adequately bind the soil and they can create holes in the levee which may result in voids and compromise levee integrity. Natural revegetation could also result in the colonization of invasive species such as reed canary grass (*Phalaris arundinaceae*). Reestablishing sod cover by seeding would return the flood risk management level to the original pre-flood level.

The recommended plan consisting of a landward levee setback to repair riverside slope erosion, the in-place repair of damaged drainage structures, and the seeding of damaged sod cover is the most cost-effective plan and is economically justified. Seeding the area with an established grass mix would provide the relatively quick establishment of a uniform, low growing vegetative cover that could be easily maintained compared to natural revegetation. This type of vegetative cover is also preferred over natural revegetation on levees because it can be mowed to a low height, which allows inspection and the assessment of levee integrity.

The no action alternative is unacceptable because it would not meet the project purpose and need of rehabilitating the damaged flood risk management project to its pre-flood condition and therefore does not restore associated social and economic benefits. The no action alternative would have no permanent or temporary construction related impacts. The no action alternative would continue to expose all public and private infrastructure and agricultural croplands previously protected by the levee prior to a high level risk of future flooding. Failure to repair the levee would adversely affect the tax base of the county and municipal governments and special districts, such as school districts. In addition, loss of jobs and potential losses in agricultural production on lands protected by the levee would also be incurred.

Section 12: CUMULATIVE IMPACTS

The combined incremental effects of human activity are referred to as cumulative impacts (40CFR 1508.7). While these incremental effects may be insignificant on their own, accumulated over time and from various sources, they can result in serious degradation to the

environment. The cumulative impact analysis must consider past, present, and reasonably foreseeable actions in the study area. The analysis also must include consideration of actions outside of the Corps, to include other State and Federal agencies. As required by NEPA, the Corps has prepared the following assessment of cumulative impacts related to the alternatives being considered in this EA.

Historically, the Missouri River and its floodplain has been altered by bank stabilization, dams on the river and its tributaries, roads/bridges, agricultural and urban levees, channelization, farming, water withdrawal for human and agricultural use, urbanization and other human uses. These activities have substantially altered the terrestrial and aquatic ecosystem within the Missouri River watershed.

Currently, the Corps is undertaking studies of the Federal levees along the Missouri River to determine if measures to improve the reliability of these existing flood risk management projects are warranted. In addition, the Corps, which administers Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, has issued and will continue to evaluate permits authorizing the placement of fill material in the Waters of the United States and/or work on, in, over or under a navigable water of the United States including the Missouri River and its tributaries. These levee repair projects typically result in minor impacts to the aquatic ecosystem. The Corps, under the authority of the Public Law 84-99 Levee Rehabilitation and Inspection Program, has and will continue to provide rehabilitation assistance to Federal and non-Federal levee sponsors along the Missouri River which participate in the Public Law 84-99 Program. These projects typically result in minor short term construction related impacts to fish and wildlife and the habitats upon which they depend. Resources typically affected by this type of project generally include, but are not limited to, wetlands, flood plain values, water quality, and fish and wildlife habitat. It should be noted that these projects do not result in an addition to flood heights or reduced flood plain area but are merely a form of maintenance to that which had previously existed.

Of the reasonably foreseeable projects and associated impacts that would be expected to occur, further urbanization of the floodplain will probably have the greatest impact on these resources in the future. The possibility of wetland conversion and the clearing of riparian habitat is ever present, and these activities also tend to impact these resources. Construction of additional agricultural levees may occur provided land becomes available for this purpose; however, the trend seems to be moving in the opposite direction and towards urban development. The era of major reservoir construction has likely past, thus impacts from these projects likely will not occur.

The adverse effects associated with the proposed project are long-term/minor associated with the loss of agricultural cropland, and short term/minor associated with project construction. These minor adverse effects would be greatly offset by restoring the flood risk management capability and its associated social and economic benefits of the existing levee system. The PL84-99 Program is designed to merely bring the damaged levees back to pre-existing conditions (i.e., the status quo). Thus, no significant cumulative impacts associated with the proposed rehabilitation of the existing levee system have been identified.

Section 13: MITIGATION MEASURES

The recommended plan will result in minor adverse impacts to mitigable resources as defined in USACE Planning regulations and under Section 404 of the Clean Water Act. These impacts are associated with borrow operations and the deposition of cleared woody debris within borrow locations. Additionally, one of the landward levee setbacks will be positioned within the Cranberry Chute levee footprint impacting approximately 1.7 acres of scrub-shrub wetland. However, approximately six acres of wetland habitat will be formed during borrow operations. General Permit Number NWKGP-41 authorizes these actions.

Cottonwoods and willows averaging < 9 inches breast diameter height will be removed during project construction. The U.S. Fish and Wildlife Service has stated that natural plant succession should provide adequate re-vegetation to impacted non-mast producing trees. Therefore, no mitigation measures are warranted or proposed.

Identification of borrow sites was completed in accordance with the Standard Operating Procedures (SOP) for the Selection of Borrow Sites Missouri River and Tributaries 1995 Levee Repair. These guidelines were developed through coordination with the U.S. Fish and Wildlife Service and the Missouri Department of Conservation. The guidelines were developed to avoid and or minimize adverse impacts to the aquatic ecosystem to the greatest extent practicable, and where possible take advantage of the borrow acquisition activity to enhance the aquatic ecosystem. Clearing of early successional woody vegetation and excavation which removes accumulated silt from existing wetland areas are considered beneficial and will enhance the overall function and value of the aquatic ecosystem. Borrow activity which expands existing borrow areas and scour holes increases their function and value. Since the proposed borrow activity has been designed to enhance the functions and values of the aquatic ecosystem no compensatory mitigation is proposed.

Section 14: COMPLIANCE WITH ENVIRONMENTAL QUALITY STATUTES

Compliance with Designated Environmental Quality Statutes that have not been specifically addressed earlier in this report is addressed in Table 1.

Section 15: CONCLUSION & RECOMMENDATION

The recommended plan consisting of a landward levee setback, seeding of eroded riverside slope sod cover, and the in-place repair of damaged drainage structures achieves the project purpose and need of rehabilitating the damaged levee to the pre-flood level of flood risk management and restores the associated social and economic benefits. The recommended plan is the most cost effective plan and is economically justified.

Because the repairs would be slightly off of current alignments in order to construct the landward levee setbacks, the recommended plan reduces available agricultural cropland by approximately six acres. However, six additional acres would be available for increased water conveyance and floodplain wildlife habitat. The recommended plan would result in no impacts to any Federally-listed threatened or endangered species or their habitat and no impacts to properties listed,

proposed for listing, eligible for listing, or potentially eligible for listing in the National Register of Historic Places. The recommended plan would result in minor impacts to wetlands located in previously borrowed areas due to excavation for borrow and the stockpiling of cleared woody vegetation. Excavation of the borrow areas would widen and deepen these areas thereby enhancing existing wetlands and the stockpiling of woody vegetation in these areas after excavation would provide temporary wildlife habitat until decomposition. These actions will be authorized under General Permit Number NWKGP-41.

Areas of the existing levee sections damaged by flooding would be temporarily disturbed by the proposed construction activity. The adverse effects associated with the proposed project are long-term/minor associated with the loss of agricultural cropland, and short term/minor associated with borrow activities and project construction. These minor adverse effects would be greatly offset by restoring the flood risk management capability and the associated social and economic benefits of the existing levee system.

Based on coordination with the resource agencies and input gained through a public interest review as documented in this Environmental Assessment, the Kansas City District – Corps of Engineers has made a preliminary determination that this project would have no significant impacts on the human environment including natural and cultural resources and Federally-listed threatened and endangered species; therefore, a Finding of No Significant Impact (FONSI) has been prepared. This NEPA decision document will be forwarded to the District Engineer with a recommendation for approval.

Section 16: PREPARERS

This EA and the associated draft FONSI were prepared by Mr. Matthew D. Vandenberg (Environmental Resource Specialist), with relevant sections prepared by Mr. Timothy Meade (Cultural Resources). The address of the preparers is: U.S. Army Corps of Engineers, Kansas City, District; PM-RP, Room 843, 601 E. 12th St, Kansas City, MO 64106.

Table 1
Compliance of Preferred Alternative with Environmental Protection Statutes and Other Environmental Requirements

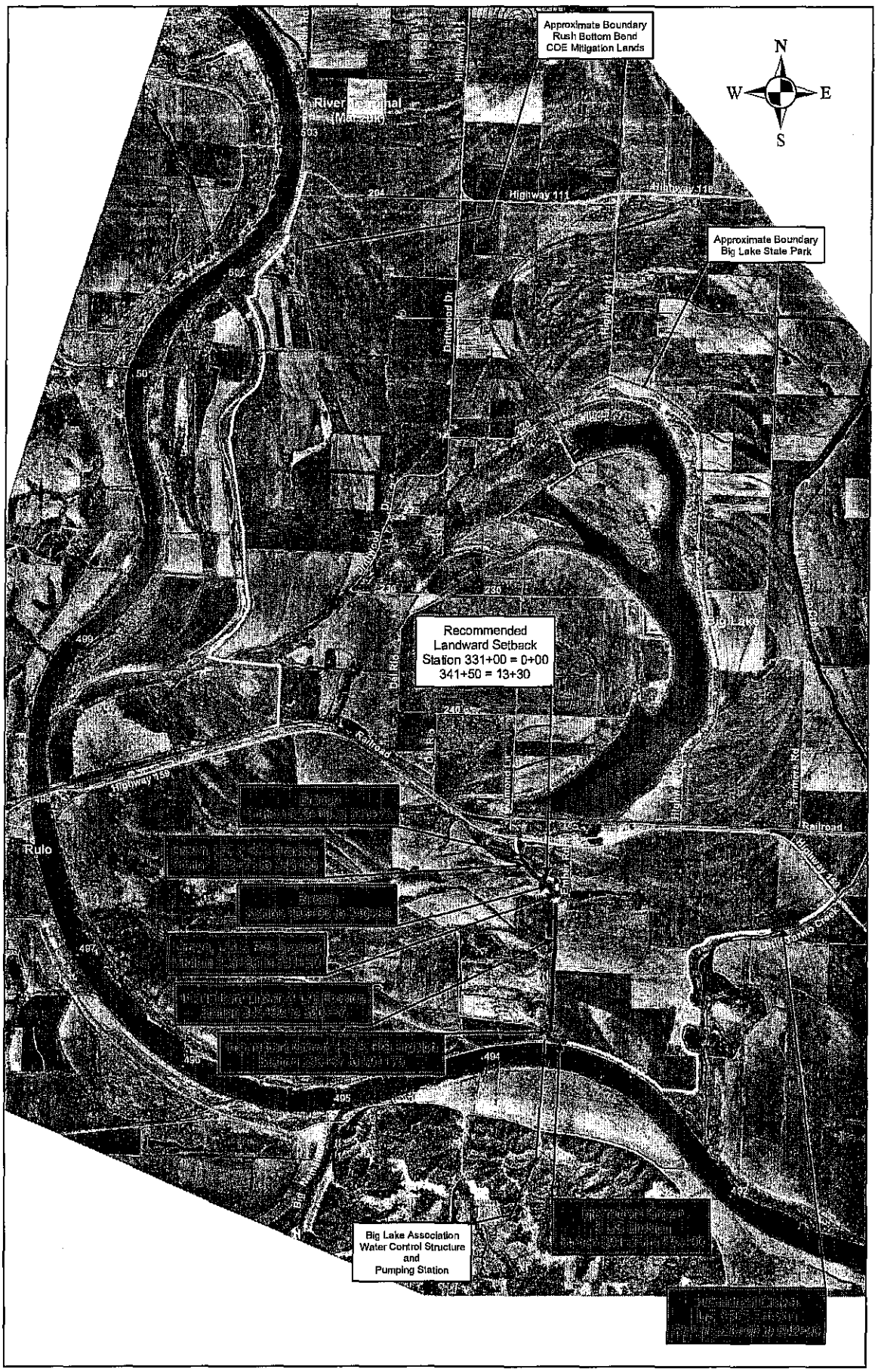
Federal Polices	Compliance
Archeological Resources Protection Act, 16 U.S.C. 470, et seq.	Full Compliance
Clean Air Act, as amended, 42 U.S. C. 7401-7671g, et seq.	Full Compliance
Clean Water Act (Federal Water Pollution Control Act), 33 U.S.C. 1251, et seq.	Full Compliance
Coastal Zone Management Act, 16 U.S.C. 1451, et seq.	Not Applicable
Endangered Species Act, 16 U.S.C. 1531, et seq.	Full Compliance
Estuary Protection Act, 16 U.S.C. 1221, et seq.	Not Applicable
Federal Water Project Recreation Act, 16 U.S.C. 4601-12, et seq.	Full Compliance
Fish and Wildlife Coordination Act, 16 U.S.C. 661, et seq.	Full Compliance
Land and Water Conservation Fund Act, 16 U.S.C. 4601-4, et seq.	Not Applicable
Marine Protection Research and Sanctuary Act, 33 U.S.C. 1401, et seq.	Not Applicable
National Environmental Policy Act, 42 U.S.C. 4321, et seq.	Full Compliance
National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470a, et seq.	Full Compliance
Rivers and Harbors Act, 33 U.S.C. 403, et seq.	Full Compliance
Watershed Protection and Flood Prevention Act, 16 U.S.C. 1001, et seq.	Full Compliance
Wild and Scenic River Act, 16 U.S.C. 1271, et seq.	Not Applicable
Farmland Protection Policy Act, 7 U.S.C. 4201, et. seq.	Full Compliance
Protection & Enhancement of the Cultural Environment (Executive Order 11593)	Full Compliance
Floodplain Management (Executive Order 11988)	Full Compliance
Protection of Wetlands (Executive Order 11990)	Full Compliance
Environmental Justice (Executive Order 12898)	Full Compliance

NOTES:

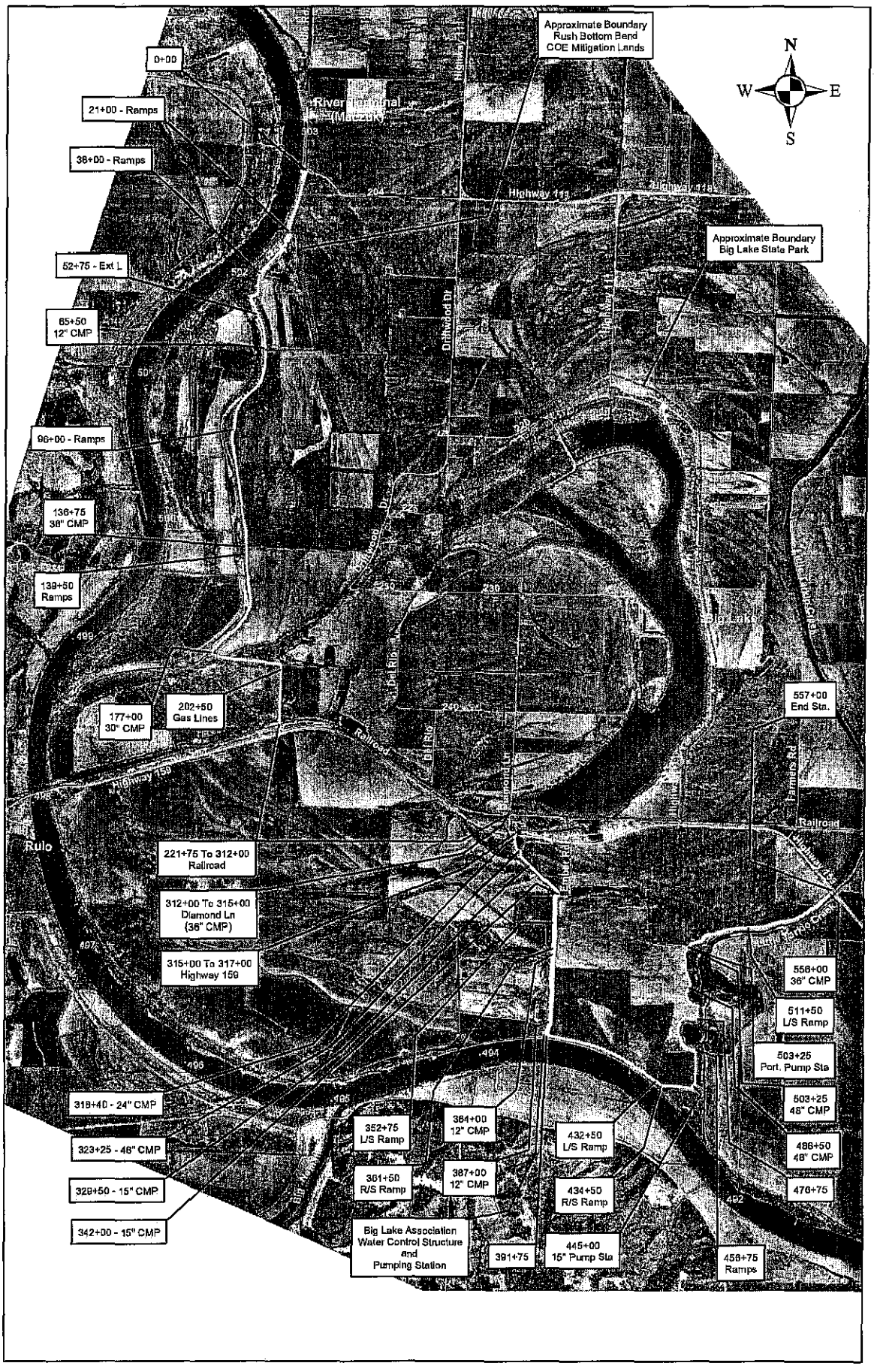
a. Full compliance. Having met all requirements of the statute for the current stage of planning (either preauthorization or postauthorization).
b. Partial compliance. Not having met some of the requirements that normally are met in the current stage of planning.
c. Noncompliance. Violation of a requirement of the statute.
d. Not applicable. No requirements for the statute required; compliance for the current stage of planning.

APPENDIX I – PROJECT MAPS

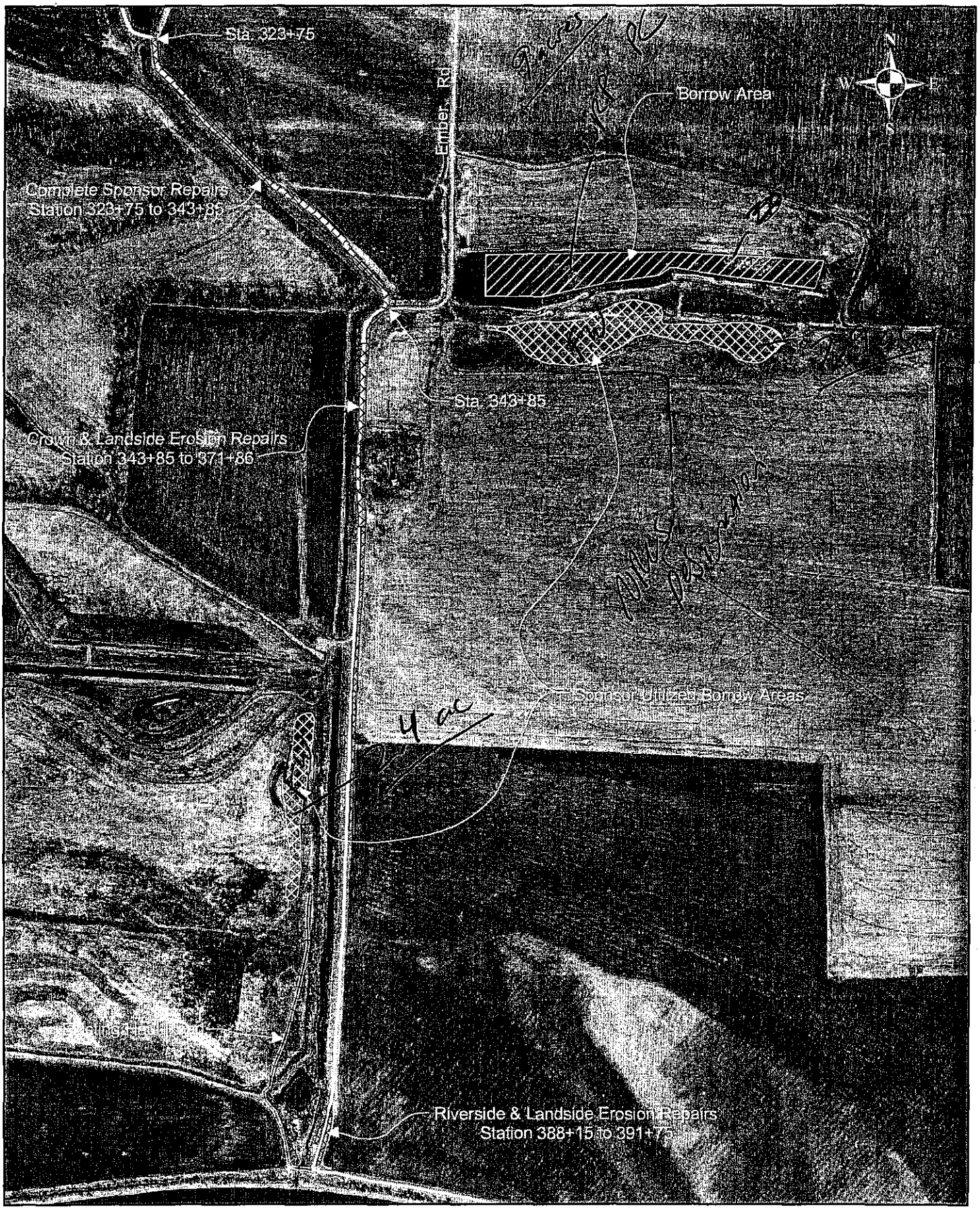
Saline-Lafayette Levee District (Item 67),
Cole's Lake Drainage District No. 2 (Item 65),
Malta Bend Levee District (Item 64),
Teteseau Bend Levee District (Item 61AC),
P.L. 84-99 Levee Rehabilitation Project
Saline County, Missouri
February 2008



ATTACHMENT D - 1



ATTACHMENT B - 1



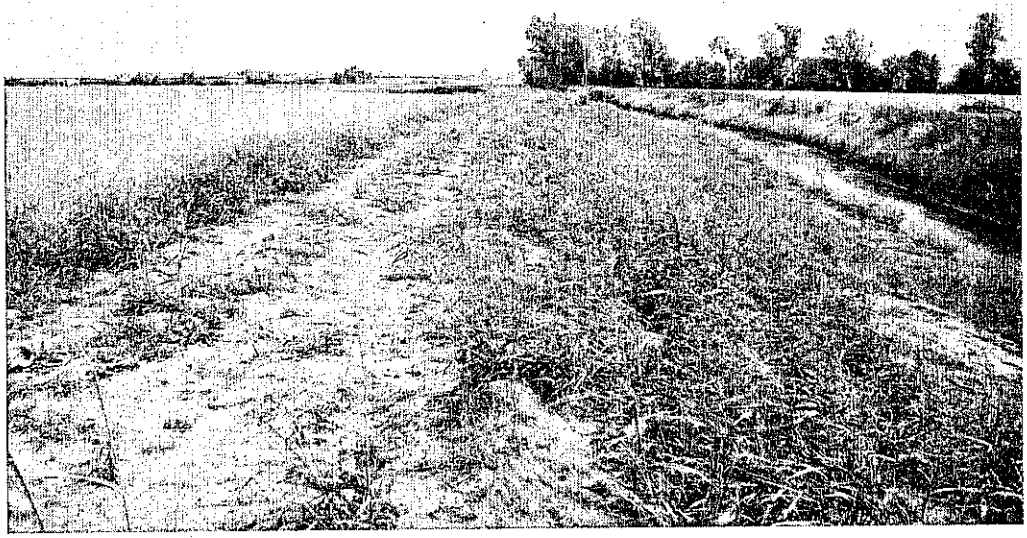
Holt County Levee District No. 10

Borrow Map

Holt County Levee District Number 10

Date: 10/4/07

Standing at approximate levee station 332+00 looking downstream at Sponsor conducted fill placement "betterment" from station 333+00 to 340+80.



Date: 10/4/07

Standing at approximate levee station 324+00 looking downstream at Sponsor conducted "improvement" operations from levee station 323+75 to 333+00.

APPENDIX II – NEPA REVIEW

Saline-Lafayette Levee District (Item 67),
Cole's Lake Drainage District No. 2 (Item 65),
Malta Bend Levee District (Item 64),
Teteseau Bend Levee District (Item 61AC),
P.L. 84-99 Levee Rehabilitation Project
Saline County, Missouri
February 2008

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

November 16, 2007

REPLY TO
ATTENTION OF

Environmental Resources Section
Planning Branch

Mr. Mark Miles
Director and Deputy State Historic Preservation Officer
State Historic Preservation Office
Department of Natural Resources
P. O. Box 176
Jefferson City, Missouri 65102-0176

Dear Mr. Miles:

The U.S. Army Corps of Engineers, Kansas City District (Corps) is planning emergency repairs to the Saline-Lafayette District Levees in Saline and Lafayette Counties. The repairs are required because of damage to the exiting structure during flooding events in May of 2007. The Corps has completed its review of the project in compliance with the terms as described in the 1993 Programmatic Agreement with your office regarding the implementation of emergency repair and restoration of damaged flood control projects as authorized by Public Law 84-99. Attached for your review and comment are project maps showing locations of the proposed work.

The Saline-Lafayette damages consist of severe riverside toe slope erosion drainage structure damages and intermittent reaches of lost (destroyed) sod cover on riverside levee embankment slope. The recommended repair action consists of repairs to severe toe slope erosion, with an approximate 778-linear-feet-long landward levee setback; severe toe slope erosion, with an approximate 1,400-linear-feet-long landward levee setback; excavation and repairs to drainage structures with disturbed area backfilled to original design grades and re-seeding of riverside levee slope.

A review of the National Register of Historic Places (NRHP) found no properties listed on the NRHP within the project area. The nearest NRHP site is the Gumbo Point site (23SA4), a prehistoric site, mapped approximately 1.3 miles to the east of the southeastern end of the Saline-Lafayette Levee. However, the Gumbo Point site is not near any of the proposed repair borrow areas. No shipwrecks are recorded within the proposed project area. A background check of the topographic site location map (Grand Pass and Carrollton, Mo, 7.5 minute topographic quads) was conducted within the district office. No other sites are recorded in or near the project area.

Examination of historic channel maps found that the Saline-Lafayette Levee project area is located within the 1879 to 1954 river channel location and thus consists of accreted lands. Prior to the 1993 work, the Corps conducted a review that included the present proposed project area and determined that the project area is located on accreted lands and would have no impact on cultural resources. SHPO concurred with this recommendation on 10 October 1993.

Given that the proposed work would be conducted in areas that have been previously determined to have a low potential for archeological sites, it appears unlikely that the project will have an effect on sites listed on or eligible for inclusion on the NRHP. Therefore, we recommend no further work for the project. If in the unlikely event that archeological materials are discovered during project construction, work in the area of discovery will cease and the discovery investigated by a qualified archeologist. The findings on the discovery would be coordinated with your office and appropriate federally recognized Native American tribes.

Thank you for your consideration in this matter. If you have any questions or have need of further information please contact Timothy Meade, USACE Kansas City District Cultural Resource Manager at Timothy.M.Meade@usace.army.mil or at (816) 389-3138.

Sincerely,

Timothy Meade
District Archeologist

Enclosure

2)

STATE OF MISSOURI

Matt Blunt, Governor • Doyle Childers, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

November 26, 2007

Timothy Meade
Corps of Engineers, Kansas City District
700 Federal Building
Kansas City, Missouri 64106-2896

Re: Emergency Repairs, Saline – Lafayette District Levees (COE) Saline & Lafayette Counties, Missouri

Dear Mr. Meade:

Thank you for submitting information on the above referenced project for our review pursuant to Section 106 of the National Historic Preservation Act (P.L. 89-665, as amended) and the Advisory Council on Historic Preservation's regulation 36 CFR Part 800, which requires identification and evaluation of cultural resources.

We have reviewed the information provided concerning emergency repairs to the Saline – Lafayette District Levees. Based on this review we concur with your recommendation that the projects are in areas of low potential, recently accreted land, or areas of previous disturbance and that there will be **no historic properties affected.** We have no objection to the initiation of project activities.

Please be advised that, should project plans change, information documenting the revisions should be submitted to this office for further review. In the event that cultural materials are encountered during project activities, all construction should be halted, and this office notified as soon as possible in order to determine the appropriate course of action.

If you have any questions, please write Judith Deel at State Historic Preservation Office, P.O. Box 176, Jefferson City, Missouri 65102 or call 573/751-7862. Please be sure to include the SHPO Log Number **(014-MLT-08)** on all future correspondence or inquiries relating to this project.

Sincerely,

STATE HISTORIC PRESERVATION OFFICE

Mark A. Miles
Director and Deputy
State Historic Preservation Officer

MAM:jd

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

REPLY TO
ATTENTION OF:

Planning, Programs and Project Management Division
Planning Branch

February 12, 2008

NOTICE OF AVAILABILITY

An Environmental Assessment titled Saline-Lafayette Levee District, Non –Federal, Emergency Levee Rehabilitation Project, and a draft Finding of No Significant Impact (FONSI) prepared by the U.S. Army Corps of Engineers, Kansas City, are available for your review on the project's website at: http:// www.nwk.usace.army.mil.

The Kansas City District – U.S. Army Corps of Engineers (CENWK), in cooperation with the project sponsors, Saline-Lafayette Levee District, propose to construct the Saline-Lafayette Levee District Levee Rehabilitation Project under the authority of Public Law 84-99, of the Flood Control Act of 1944. Under this authority, the Corps of Engineers can provide assistance to public agencies in responding to flood emergencies such as the rehabilitation of flood control works damaged or destroyed by floods.

The project area is located in Saline County, Missouri along the right descending bank of the Missouri River, between river miles 292.0 to 278.2. The proposed project would involve repair to severe toe slope erosion with landward levee setbacks, in-place repairs, which include excavation and repairs to drainage structures and disturbed area backfill, and re-seeding of riverside slopes. Repairs are required as a result of the flood event declared on 6 May 2007.

Copies of the EA and the draft FONSI are also available by contacting Mr. Matthew D. Vandenberg; U.S. Army Corps of Engineers; PM-PR, 601 E. 12th St, Kansas City, Missouri, 64106; to request a copy in writing, at (816-) 389-3146 to request a copy by phone, or at matthew.d.vandenberg@usace.army.mil to request a copy by e-mail.

The public review and comment period for the EA and draft FONSI will end 30 days from the date of this letter.

Sincerely,

for Richard A. Schultz

David L. Combs
Chief, Planning Branch